

REMARKS

Claims 10 - 19 remain active in this application. Claims 1 - 9 have been canceled as being non-elected in response to a requirement for restriction. Amendment of claim 11 has been requested in response to a criticism by the Examiner. No new matter has been introduced into the application. The continued indication of allowability of claims 13 - 15 is noted with appreciation.

The Examiner has objected to claim 11 for failing to further limit claim 10. This ground of rejection is respectfully traversed, particularly as being moot in view of the amendments made above.

It is clear that claim 11 does, in fact, further limit the subject matter recited in claim 10, from which it depends, by recitation of particular materials of the first and second films. However, it is understood that the Examiner considers claim 11 to broaden claim 10 in some respects since it does not associate respective tensile or compressive stress derived from the respective materials with particular films. In response, it is respectfully submitted that claim 10 recites the compressive or tensile effects of the first and second films, respectively, in the channels of the respective transistors and, in view of the association already recited, it is respectfully submitted to be an unreasonable construction of claim 11 to assert that it recites use of a material recited therein which would (or could) be contrary to those effects and thus this objection and the possible construction of claim 11 on which it is based are respectfully submitted to be illusory. Nevertheless, amendment of claim 11 has been requested to avoid such a construction of claim 11 to thus render the objection moot and thereby expedite prosecution of this application. Accordingly, reconsideration and

withdrawal of this objection are respectfully requested.

Claims 10 - 12 and 16 - 19 have again been rejected under 35 U.S.C. §102 as being anticipated by Hachimine et al. This ground of rejection is again respectfully traversed for the reasons of record and the further remarks provided below.

While the Examiner no longer explicitly asserts inherency in regard to layer 15 of Hachimine et al., as has been repeatedly demonstrated to be improper, the Examiner maintains that the layer 15 answers the recitation of a "shear force isolation layer" and that it "would be" such a layer (which it clearly is not) simply by virtue of its location between tensile and compressive layers *in an intermediate state of manufacture*. To summarize previously submitted remarks, paragraph [0170] of Hachimine et al., apparently referenced by the Examiner, is silent as to any such shear force isolation function. Rather, the function of layer 15 is identified in paragraph [0207] as being an "etch stopper". Further, paragraph [0214] of Hachimine et al. discusses the compromise of the stress provided by one stressed layer if another stressed layer overlying it (and separated therefrom by layer 15) is not removed whereas, if any shear force isolation function in accordance with the claimed invention was attributable to layer 15, the removal of the overlying stressed layer would be unnecessary since isolation of shear forces from the overlying layer to the underlying layer would avoid the very compromise of stresses which Hachimine et al. discloses to *require* the removal of the overlying stressed layer and for which Hachimine et al. provides no other solution and particularly not the solution provided by the invention through use of a shear force isolation layer allowing the overlying stressed layer to be retained in place. Therefore, it is again respectfully submitted that

Hachimine et al. does not, in fact, anticipate any claim in the application and the Examiner has failed to make a *prima facie* demonstration of anticipation (or obviousness) in regard to any claim since layer 15 of Hachimine et al. clearly does not provide "shear force isolation".

In the present office action, the Examiner indicates that the previously submitted remarks summarized above are not found to be persuasive since the Examiner finds it "apparent that the Applicant reads a "non-stressed" limitation of the oxide layer 12 or 120 into the claim" while no such limitation is recited therein and thus concludes that layer of Hachimine et al. "would be a shear force isolation layer" since it is located between oppositely stressed layers, as alluded to above. It is respectfully submitted that such a conclusion does not logically follow from the mere location of layer 15 particularly since paragraph [0214] of Hachimine et al. clearly, explicitly and unambiguously indicates that stresses are communicated from layer 14a to layer 14b (as identified in, for example, Figure 24) through layer 15 and compromises stresses in the channel which would otherwise result from layer 14b, thus *necessitating* the removal of layer 14a *by use of layer 15 as an etch stop* (as noted in paragraph [0207] - see also paragraphs [0220] - [0224]) to attain the desired result in the completed (as distinct from an intermediate stage of manufacture) device. It is clearly improper to conclude that structure in a reference is *other than* what it is disclosed to be or that it has properties *different from and opposite* those disclosed in the reference, particularly in a rejection for anticipation under 35 U.S.C. §102; for which it is required that the reference disclose the identical invention in as *complete detail as is contained in the claims* (see *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1051, 1053,

Fed. Circ., 1987, previously cited and to which the Examiner has not replied), even if "inherency" is not explicitly invoked by the Examiner.

Further, contrary to the Examiner's assertion that Applicant reads a "non-stressed" limitation into the claims which is not recited therein, there is no requirement that any portion of the recited shear force isolation layer be non-stressed (although a non-stressed layer, as deposited, is disclosed to be "preferred" at page 11, lines 21 - 22) but only that shear forces on one side of it (e.g. due to compressive or tensile stresses) will not be transferred to a film on the other side of the shear force isolation film (as Hachimine et al. explicitly discloses will, in fact, occur across film 15 therein). Typically, this avoidance of transfer of significant forces across a film is achieved in accordance with the invention by providing a film of a suitable (e.g. low) density and exhibiting elasticity (or lack of rigidity) such that strain caused in the film by stresses (in shear) on one side of the film are not transmitted to the other side of the film to apply (in shear) stress in an adjacent structure but are accommodated by the elasticity or lack of rigidity of the "shear force isolation film". This can be visualized by, for example, squeezing one end or side of a block of elastic material, such as an eraser, and observing that little, if any, distortion of the geometry occurs at an opposite end or side thereof. (In contrast, it should be noted that, in general, a film suitable for use as an etch stop, as film 15 is intended to function in Hachimine et al., should be of relatively high density and, hence, rigidity, to function acceptably as an etch stop; thus resulting in the problem which Hachimine et al. explicitly reports.)

It can readily be appreciated that such a mechanism for preventing or reducing transfer of

stresses does not *require* that any identifiable portion thereof be "non-stressed" but, rather, strain diminishes over the thickness of the film to a level which does not cause significant stress in another layer and no argument that any portion of the shear force isolation film is "non-stressed" has been presented. This is particularly evident when it is considered that stresses are applied to the shear force isolation film on at least one side thereof. Other mechanisms of shear force isolation to prevent communication of stress and using a film of material may be possible which may not require any portion of the film to be "non-stressed". Therefore, it is respectfully submitted that the Examiner's asserted observation is not well-founded and there is no technical basis or basis in the remarks previously presented for assuming any "'non-stressed' limitation" to have been explicitly or even tacitly relied upon and which would not, in any case, justify summarily dismissing arguments previously presented as the Examiner has done.

Moreover, even if (*arguendo*) such a condition were theoretically required in order to support the meritorious effects of the invention, it is not necessary to explicitly recite the condition (or the underlying theory, insofar as it is understood by the inventors at the time the invention was made) in the claims when the function of the layer is, in fact, explicitly recited, and particularly where that function is clearly not answered by, but, rather, contradicted in, the prior art. Furthermore, the presence or absence of a "non-stressed" limitation (if correct) in the claims of this application is utterly irrelevant to what layer 15 of *Hachimine et al.* is disclosed to be and the properties it is disclosed to possess or exhibit or the function it is relied on to provide.

It should also be noted from paragraph [0213] of Hachimine et al. that the communication of stresses through layer 15 is considered to be a "problem found ... during development" of the invention of Hachimine et al. for which the only solution disclosed in Hachimine et al. is the removal of an overlying stressed layer. The claimed invention, in sharp contrast thereto, may be considered to involve an alternative solution *not found or even conceived*, much less enabled by Hachimine et al. which does *not* require removal of the a stressed layer portion overlying another stressed layer which Hachimine et al. indicates is *required* and thus provides at least substantial process simplification not available from Hachimine et al.

Therefore, it is clearly seen that the sole ground of rejection remaining in this application is in error and without basis and, moreover, the sole reason for not finding the previously submitted remarks to be persuasive is irrelevant to the content of Hachimine et al. and utterly without basis in fact or the record and is clearly tantamount to maintaining an improper assertion of inherency; the impropriety of which the Examiner appears to acknowledge by not indicating a reliance on inherency but construing the reference contrary to the disclosure thereof. Accordingly, it is respectfully submitted that the sole ground of rejection is clearly untenable and, upon reconsideration, withdrawal thereof is clearly in order. Thus, such action is respectfully requested.

It is also respectfully submitted that the entry of the above-requested amendment to claim 11 is well-justified. The amendment is confined to matters of form which are the subject of a criticism newly raised by the Examiner and are non-substantive and directed to merely avoiding an incorrect and unintended construction of the claim which, in any case, is

believed to be unwarranted. Therefore, no new issue can possibly be raised by the requested amendment. Further, the entry of the amendment is also respectfully submitted to be well-justified as placing the application in condition for allowance or, in the alternative, better form for Appeal by materially reducing and simplifying issues. Accordingly, entry of the above-requested amendment is respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 09-0458 of International Business Machines Corporation (E. Fishkill).

Respectfully submitted,



Marshall M. Curtis
Reg. No. 33,138

Whitham, Curtis, Christofferson & Cook, P. C.
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190